

TOFD Caliper

Product Guide

ARORA
NDT Products & Accessories

Arora Technologies (P) Limited
619 & 620 The Great Eastern Galleria,
Plot No. 20, Sector 4, Nerul, Navi
Mumbai 400 706, India
T: +91-22-6138 0600, 2770 3913,
2772 9077 | E: info@arorandt.com
W: www.arorandt.com

www.phoenixisl.com

Specialists in design and manufacture of ultrasonic transducers, manual and automated scanning equipment for non-destructive testing (NDT).

For over 30 years, Phoenix tools and scanners offer NDT professionals solutions to inspection requirements from weld testing and crack detection, to c-scan and composite inspections and serve a wide range of industry sectors including:

- Nuclear and power generation
- Offshore oil & gas and petrochemical
- Aerospace
- Composites
- Rail

Phoenix designs and manufactures its products in accordance with internationally recognised ISO 9001 quality management standards that ensures consistency in supply and our commitment to continuous improvement.

The dynamic range of products encompasses the full range of ultrasonic NDT techniques, including: phased array, corrosion mapping, pulse echo and TOFD inspections.



A pocket-sized, manual A-frame with a waterproof wheel encoder, ideal for basic TOFD inspections.

- Holds one pair of TOFD probes
- Single axis B or D scans
- Inspects 2" pipes up to flat
- Simple to use
- Waterproof encoder
- No tools required
- Provides low-cost TOFD inspection capability

www.phoenixisl.com/tofd-caliper

MultiMag



A highly versatile manual scanner with an angular adjustable frame for multiple inspection configurations.

- Holds up to four probes
- Phased array, TOFD or pulse-echo techniques separately or combined
- Inspects circumferential pipe welds from 3" up to flat on magnetic material
- Highly customisable

www.phoenixisl.com/multimag

C-Clamp Encoder



A versatile, simple to attach, waterproof encoding accessory with a spring loaded wheel.

- Holds one probe
- Low-cost and easy to use
- For a wide range of single axis linear and sectorial phased array inspections on any material type
- Encoder can be rotated 90° for different inspection needs
- Attach to any probe or wedge up to 55mm wide

www.phoenixisl.com/c-clamp-encoder

WREN



A compact user-friendly tool, ideal for areas with restricted access. Spring-loaded probe mounts enable inspection of mismatched or irregular welds.

- Holds one pair of TOFD probes with spring loaded suspension
- Single axis B or D scans
- Waterproof encoder
- Inspects 2" pipes up to flat
- 4" or 8" frame sizes available for increased PCS

www.phoenixisl.com/wren

MagMan



A widely popular robust manual scanner for multiple probe inspections of both circumferential and longitudinal pipe welds.

- Holds up to twelve probes
- Phased array, TOFD and pulse-echo techniques separately or combined
- Inspects pipe welds from 2" (circumferential) and 9" (longitudinal) up to flat on magnetic material
- Waterproof wheel encoder

www.phoenixisl.com/magman

Bracelet



A low-profile scanner for weld inspection on small bore pipes available in both single and dual-sided configurations.

- Holds one or two probes
- Clamps around pipe to attach to any material type
- Single-sided configuration for phased array inspection
- Dual-sided configuration for phased array or TOFD inspections
- Inspects pipes from 0.5" to 6"

www.phoenixisl.com/bracelet

Swift



A lightweight magnetic wheeled scanner for controlled and accurate TOFD inspection.

- Holds one pair of TOFD probes with spring loaded suspension
- Single axis inspection
- Option of pivoting wheel units to enable both B and D scans
- Inspects 3" pipes up to flat on magnetic material
- Incorporates a brake to lock the scanner at a fixed location

www.phoenixisl.com/swift

SAW Bug



A powerful 4WD motorised, magnetic wheeled buggy for single direction inspection of circumferential pipe and vessel welds at constant speed.

- Holds up to six probes
- Phased array and TOFD techniques separately or combined
- Inspects circumferential pipe welds from 4" up to flat on magnetic material
- Low cost automated inspections

www.phoenixisl.com/sawbug

Phased Array Wedges



Phoenix manufactures a wide range of wedges for phased array probes.

- Wedges compatible with industry standard phased array probes
- Bespoke wedges can be designed and manufactured on request
- Wedges can be contoured for use on pipes and curved surfaces
- Couplant irrigation channels and scanner mounting holes included
- Wedges can be fitted to scanner mounting cradles and holders

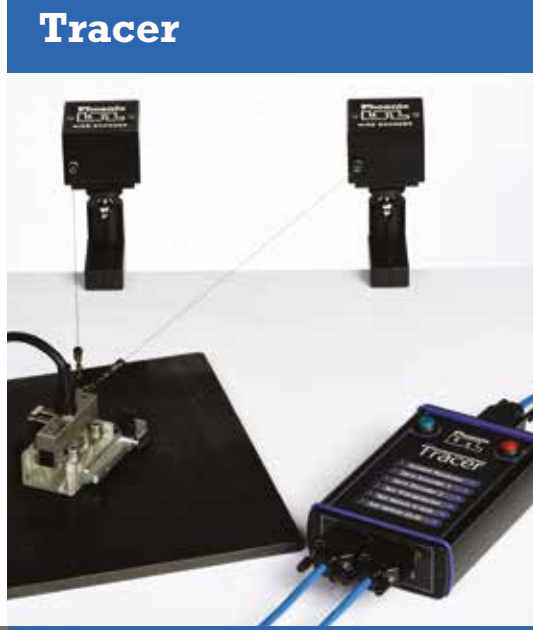
Custom-made Solutions

C-Scan Inspection

Accessories



If a standard product, from our comprehensive range, does not precisely fit your inspection needs a small modification can often deliver an economical solution based on proven technology. Phoenix also has the expertise and capability to develop fully customised products and systems to meet the most challenging NDT inspections.

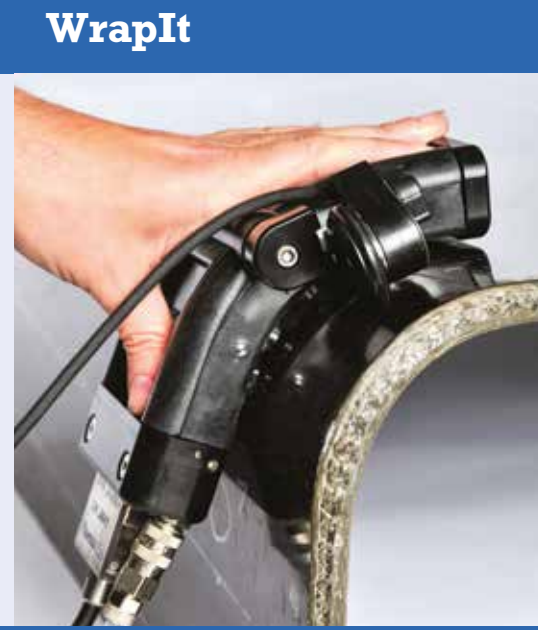


Tracer

Versatile, portable freehand X-Y mapping system without the constraints of a scanning frame.

- Easy to assemble in any position
- Works with any two axis instrument
- Outputs accurate positional data for up to 2m x 2m scan area
- Use with linear array probes for fast, accurate inspections
- Wire encoders include magnetic, vacuum and clamping mounts

www.phoenixisl.com/tracer



WrapIt

A flexible ultrasonic phased array tool that can be wrapped around a curved geometry.

- Inspects along curved composite and laminate components
- Adapts to scan concave or convex surfaces and parts with changing curvature
- Features a flexible phased array transducer with a rubber housing and single axis encoder

www.phoenixisl.com/wrapit



PreAmplifier

For TOFD inspections, when using long probe leads and additional gain is required to enhance weak signals.

- 40dB Gain
- Ultra-low noise
- Wide signal bandwidth
- Low power - single 9V PP3 battery or external 5-12 VDC
- Available as TOFD 1, 2 or 4 channel

www.phoenixisl.com/preamplifier-ultra-low-noise-tofd-pulse-echo

Transducers

MapMan Sp-Arc

CDS – Couplant Delivery System



A comprehensive range of high-performance ultrasonic transducers for general flaw detection and thickness measurement. The Phoenix range is available in a wide range of frequencies, crystal sizes, case constructions and connector types.

Download a catalogue from the Phoenix website:

www.phoenixisl.com/transducers-wedges



MapMan

Dual axis encoded manual X-Y scanner for inspecting larger pipework and vessels.

- Inspects ferritic pipes from 4" up to flat, with belt option available for other materials
- Scan width of up to 550mm with fixed increment positions for rapid change between scan lines
- Rubber wheels with switchable magnets provide smooth motion
- Brake can be locked to maintain position when released

www.phoenixisl.com/mapman



Sp-Arc

A unique phased array scanner for corrosion mapping on small bore pipes.

- Curved phased array probe submerged in a water box
- Moves longitudinally along unlimited lengths of straight ferritic pipes from 1" to 4"
- Up to 120° coverage (1" - 2")
- Immersion quality data provides excellent near surface resolution

www.phoenixisl.com/sp-arc



Versatile, battery-powered, variable flow rate pumping system to deliver couplant for on-site ultrasonic inspections.

- Alleviates the need for manual water sprayers
- Battery operated for up to six hours continuous use
- Can be used whilst charging
- Self-priming up to 1.5m
- For use with one or multiple transducers
- Maintains water pressure
- Can pump viscous liquids

www.phoenixisl.com/cds-couplant-delivery-system

Phoenix Inspection Systems Limited
Dalton House, 40 Hardwick Grange,
Warrington, WA1 4RF, UK
t: +44 (0) 1925 826 000
e: sales@phoenixisl.com

Swipe R-Evolution

Quick Features Product Guide

Innovators in NDT Technology




Swipe

Dual axis encoded manual X-Y scanner for inspecting flat or curved components.

- Automatic brakes on both axes maintain position when scanner is released
- Scan widths of 400mm and 600mm available with interchangeable arms
- Available with magnetic and non-magnetic wheel sets
- Holders available for a wide range of probes

www.phoenixisl.com/swipe



R-Evolution

Ultrasonic phased array roller probe in a water filled tyre with an ergonomic single axis buggy.

- Interchangeable roller probes available from 1MHz to 10MHz
- Compact design weighs only 1kg to minimise operator fatigue
- Two guidance lasers for accurate alignment of scans
- Self-aligns to curved surfaces
- Array normalisation is easy with external angle fine-tuning key

www.phoenixisl.com/r-evolution

The information below is a summarised guide to the features and capabilities of Phoenix standard products, configured for optimal inspections. Phoenix scanners can also be configured for other techniques or inspection surfaces with the addition of optional accessories or modifications.

	Application			Technique			Inspection Material Properties		
	Weld Inspection	Corrosion Mapping	Aerospace	TOFD	Phased Array	Pulse Echo	Magnetic	Non-Magnetic	Composite
Sp-Arc		•			•		•		
MapMan		•			•		•		
R-Evolution		•	•		•		•	•	•
Swipe		•	•		•	•	•	•	•
Tracer		•	•		•	•	•	•	•
C-Clamp Encoder	•	•	•		•	•	•	•	•
WrapIt		•	•		•		•	•	•
TOFD Caliper	•			•		•	•	•	
WREN	•			•		•	•	•	
Swift	•			•		•	•	•	
Bracelet	•				•		•	•	
MultiMag	•			•	•	•	•	•	
MagMan	•			•	•	•	•	•	
SAW Bug	•			•	•	•	•	•	